

Standard operating procedure for HAI surveillance support visits

This document describes the activities to be performed by a support team visiting a hospital participating in a healthcare-associated infection (HAI) surveillance network. The support visit process is summarized in this SOP, including:

1. Support visit preparation
2. Activities to perform during a support visit
3. Sample support visit structure

Support visit preparation

An initial support visit should be scheduled soon (1-3 months) after a hospital begins participating in the surveillance network. Ongoing support visits will be scheduled to each hospital as resources allow, with a goal of visiting each hospital in the network at least 2 times per year.

Members of the support team may include representatives from the surveillance network's central coordinating team, the country's ministry of health, CDC, and other key stakeholders.

The support team should prepare for a hospital visit several weeks in advance. Preparation should include:

- Discussions with the hospital's administration and surveillance team to schedule the support visit
- Preparation of extra hard copies of protocols, forms, etc. in case the hospital has run out of any surveillance materials
- Review of surveillance data reported from the hospital to the network to identify potential data quality and completeness issues and infection rates, etc.
- Request to the hospital's surveillance team to make a subset of previous culture results and affiliated medical records available for joint review with the support team, if possible

Activities to perform during a support visit

The duration of and activities performed during the support visit will vary based on the capacity and experience of the hospital's surveillance team and findings from previous support visits. Most activities can be accomplished in 4-6 hours of working time.

Core activities for all support visits should include:

Arrival/introductions (15-30 mins)

- Introductory meeting with key hospital stakeholders (including administration)
- Overview meeting summarizing the purpose of the support visit with heads of IPC and microbiology and the hospital's surveillance team, including ICU clinical staff

Hospital summary (15-30 mins)

- The hospital should prepare a brief presentation summarizing their surveillance implementation to date, including high level descriptions of collaborations between IPC, ICU, and microbiology teams, case finding and denominator collection processes, and challenges encountered.

Summary discussion via informal conversations or formal interviews with key staff (30-60 mins)

- Discussions with key stakeholders will allow the support team to understand hospital-specific challenges, gaps, and needs in the HAI surveillance process. This can be done in an informal setting with the hospital's surveillance team or through a formal structured interview process.
- Potential discussion/interview questions for various groups of stakeholders are provided as Appendix 1 of this document
- Key stakeholders to engage include the IPC/surveillance team(s), microbiology lead, and clinical staff working in the ICUs participating in surveillance

Review of case finding practices (60-90 mins)

- A main goal of the support visit is to assess how effectively the hospital's surveillance team is applying HAI surveillance definition(s), through one of two options:
 - Ideally, hospitals should be able to provide a list of all positive cultures and their affiliated medical records for a given time period for the support team to review and discuss with the hospital team. This requires some preparation on the hospital's side; the support team should discuss this request with the hospital team during preparation for the support visit.
 - If a hospital is unable to provide this information, the support team should participate in the hospital team's surveillance activities on the day of the visit. Key areas to assess include:
 - Communication between the laboratory and surveillance teams, including access to positive culture results from all specimen sites
 - Application of HAI surveillance definition criteria to positive cultures based on review of archived medical records or patient bedside charts
- Challenging cases can be presented to the joint hospital/support teams for discussion during this session
- The support team should assess changes in culturing practices in ICUs participating in surveillance (e.g., are more cultures being drawn after implementation of surveillance?)

Review of denominator collection practices (30 mins)

- Support visits also provide an opportunity to ensure that HAI denominator data is being collected according to surveillance protocols
- The support team should discuss or observe denominator data collection practices with staff members in each ICU participating in surveillance
- The team should confirm the presence of a denominator data collection form in each ICU participating in surveillance with all fields complete

Assessment of surveillance data quality, reporting, and use (30 mins)

- The support team should review case report forms, denominator forms, and case registers from a given period of time to assess their accuracy and completeness
- The hospital should describe its processes for sharing data with the central network team (this will include discussion of any web-based data reporting systems being used)
- The support visit serves as an opportunity to see if HAI surveillance data is being analyzed by the hospital's surveillance team before being sent to the central surveillance team. If so, is

the data (or data received back from the central team in feedback reports) being used for internal quality improvement efforts?

Outbrief and wrap-up (30 mins)

- The support team and hospital team should gather for a high level review of the hospital's best practices as well as challenges and needs surrounding HAI surveillance activities
- A summary of best practices and potential gaps is provided as Appendix 2. This summary can be used as a guide for providing feedback to a hospital.
- Next steps for surveillance support should be discussed and recorded (e.g., timeline for next visit, any pending resources to be provided, etc.)

Optional activities for support visits (depending on available time and hospital needs) include:

Formal refresher training (60 mins)

- During most support visits, refresher training will be provided through "on the spot" guidance during review of surveillance processes, discussion of challenging cases, and conversations with the hospital surveillance team
- However, support visits also provide an opportunity to deliver more formal refresher training, which may be particularly useful for new staff
 - Refresher training may be tailored based on findings from previous support visits or concerns based on data received by the central surveillance team
 - At a minimum, the training should include a brief review of HAI case definition(s), case finding processes, and processes for collecting denominator data

Visits to ICUs participating in surveillance (60 mins)

- If time allows, the support team can visit ICUs participating in HAI surveillance to review the ICU's surveillance processes and communication with the microbiology department and hospital surveillance team
- Visits may be targeted based on data that has been reported and each ICU's general performance and cooperation with surveillance activities

Sample support visit structure

The schedule below shows one option for organizing support visit time. This structure likely works best for the first visit to a hospital, when the support visit team is less familiar with how the hospital performs surveillance. In subsequent visits, some elements (including ICU visits) are not as necessary.

This schedule assumes an arrival time of ~10:00 AM and a departure time of ~4:00 PM, but the support visit team and the hospital team can arrange a time and visit structure that works best for all participants.

| Time | Activity | Comments |
|---------------------|--|--|
| 10:00 – 10:15 AM | Arrival and introductions | Hospital leadership should attend this session, if possible. |
| 10:15 – 10:45 AM | Hospital presentation | Hospital leadership should attend this session, if possible. The hospital team should deliver a brief overview of how HAI surveillance has been implemented to date. A/V system should be available. |
| 10:45 – 11:15 AM | Summary discussion with key staff | This high-level discussion will focus on surveillance processes, challenges, and gaps and will inform discussions in subsequent sessions. |
| 11:15 AM – 12:30 PM | Review of case finding practices | Surveillance team should provide recent microbiology lab line lists used in surveillance and a subset of medical records to review with support visit team. |
| 12:30 – 1:00 PM | Review of denominator data practices | Surveillance team should provide recent denominator data forms from each ICU participating in surveillance. |
| 1:00 – 2:00 PM | Lunch | |
| 2:00 – 2:30 PM | Discuss data quality, reporting, and use | Surveillance team should provide recent completed case report forms. |
| 2:30 – 3:30 PM | ICU visits | Surveillance team members should show the support visit team how they perform surveillance on the unit. It is not necessary to visit all ICUs participating in surveillance. |
| 3:30 – 4:00 PM | Outbrief | Hospital leadership should attend this session, if possible. |
| 4:00 PM | End visit | |

Appendix 1. Discussion/interview questions for various groups of surveillance stakeholders

Surveillance/IPC team:

- Describe the surveillance process. How are cases identified? How do you determine if a case meets case definition?
- Are there any challenges in receiving positive culture data (for all specimen sources)?
- When do you begin completing the CRF? Do you use any documents or resources when completing the CRF?
- Are there sections of the CRF that are challenging to complete?
- Are there sections of the CRF where data is not available from the laboratory or medical record?
- On average, how long does it take to complete the CRF?
- Who collects denominator data in each surveillance unit? Do they do it every day? Who does it if regular staff is not available?
- Are there challenges in collecting denominator data?
- Do you have particular challenges or difficulties with the surveillance protocol (e.g., case definitions, rules, etc.)?
- Does someone at the hospital analyze the surveillance data before it is sent to AIIMS?
- Based on data collected from the surveillance system, have changes been made at the hospital to improve HAI prevention?
- What has your overall experience with the surveillance system been? What are its strengths/weaknesses? How could it be improved?
- What kinds of additional support might make the surveillance easier for you?

Microbiology Department Head:

- Are you familiar with the HAI surveillance system operating in several ICUs of the hospital?
- Has there been an increase in requests for blood/urine/other cultures in ICUs where surveillance system has been launched?
- How and when do you report positive blood and urine cultures to the surveillance/IPC team? To clinicians?
- Are there barriers to reporting laboratory results as soon as they are available (for all specimen types)?

ICU physicians: (if time allows and feedback would be relevant)

- Are you familiar with the HAI surveillance system that has been launched in this ICU?
- What is your role in the surveillance system? Do surveillance team members routinely visit your ICU?
- Do you receive information on individual HAI cases reported to the surveillance system from your ICU?
- Do you receive information on HAI rates for your ICU?
- Based on data collected from the surveillance system, have changes been made in your ICU to improve HAI prevention?
- What generally causes a clinician to order blood and urine cultures? Are results returned to the ICU in a timely fashion? Do they result in changes to patient management/antibiotic treatment?
- Has the HAI surveillance system been burdensome to you in any way?

Appendix 2. Assessing practices at surveillance sites during a support visit

| Topic | Best practice | How to assess | Potential gaps identified | Recommended action for gaps |
|--|--|--|---|--|
| Case finding – laboratory results | <ul style="list-style-type: none"> • Surveillance team receives daily reports of positive blood and urine cultures (logbook or report) • Surveillance team has access to results of cultures from all body sites | <ul style="list-style-type: none"> • Discuss laboratory communication process with microbiology and surveillance teams | <ul style="list-style-type: none"> • Surveillance team receives reports of positive blood and urine cultures 2 times per week or fewer • Surveillance team has challenges accessing results of cultures from some body sites | <ul style="list-style-type: none"> • Facilitate conversation between surveillance team and laboratory to increase frequency of reporting and/or access to culture data |
| Case finding – applying case definitions | <ul style="list-style-type: none"> • Surveillance team uses case finding worksheet/table to track potential HAI cases • Surveillance team applies case definitions and reporting rules correctly. | <ul style="list-style-type: none"> • Discuss case finding process with surveillance team • Observe/participate in surveillance process (e.g., chart review, use of worksheets, etc.) • Present standard sample cases to surveillance team and discuss | <ul style="list-style-type: none"> • Surveillance team has no process or form used to organize lab and clinical data • Surveillance team demonstrates gaps in knowledge on application of case definition and reporting rules | <ul style="list-style-type: none"> • Review case finding worksheet/table, reporting algorithms, and case definitions with surveillance team. Focus on major gaps in knowledge. • Consider refresher training at next support visit |
| Denominator data | <ul style="list-style-type: none"> • Surveillance team has identified process to collect denominator data at same time every day • Data collectors know denominator definitions and how to count correctly | <ul style="list-style-type: none"> • Observe denominator collection, if possible • Discuss process with data collectors • Present scenarios to data collectors and discuss | <ul style="list-style-type: none"> • Denominators are collected at different times each day • Denominators are not collected every day • Denominators are counted incorrectly (e.g., a patient w/2 central lines is counted twice, etc.) | <ul style="list-style-type: none"> • Review appropriate practices with staff who collect denominator data • Consider refresher training at next support visit |